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(11) **EP 0 760 547 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
28.05.1997 Bulletin 1997/22

(51) Int. Cl.⁶: **H02J 7/00**

(43) Date of publication A2:
05.03.1997 Bulletin 1997/10

(21) Application number: **96113497.0**

(22) Date of filing: **22.08.1996**

(84) Designated Contracting States:
FR GB IT

(30) Priority: **25.08.1995 JP 217129/95**

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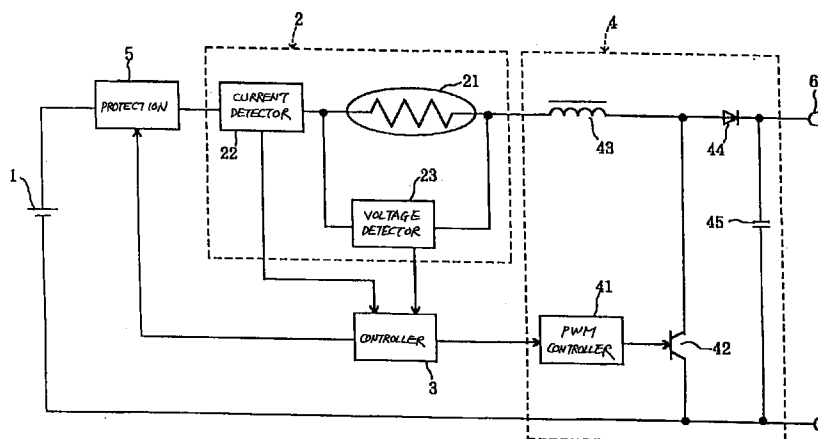
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(54) **Battery pack with a lithium ion secondary battery**

(57) A battery pack of the present invention and using a lithium ion secondary battery is capable of correcting, when temperature around the battery pack is low and causes the voltage of the battery to drop due to the characteristic of the battery, the voltage to a voltage

expected to appear at normal temperatures. Therefore, the battery pack outputs a constant voltage on its output terminal without regard to the ambient atmospheric temperature.

FIG. 4



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EUROPEAN SEARCH REPORT

Application Number
EP 96 11 3497

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
Y	GB 2 282 924 A (NIPPON ELECTRIC CO) 19 April 1995 * the whole document *	1,2	H02J7/00
Y	US 5 109 151 A (DEMIZU AKIRA ET AL) 28 April 1992 * the whole document *	1,2	
A	US 4 687 956 A (ITOH HIROSHI ET AL) 18 August 1987 * the whole document *	1-3	
A	PATENT ABSTRACTS OF JAPAN vol. 003, no. 107 (E-136), 8 September 1979 & JP 54 085767 A (SEIKO INSTR & ELECTRONICS LTD), 7 July 1979, * abstract *	1-3	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6) H02J G05F B60R F02P
Place of search THE HAGUE		Date of completion of the search 25 March 1997	Examiner Moyle, J
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 01.82 (P04C01)

EPA	HAUPTDIREKTION RECHERCHE	ZWISCHENDIENSTLICHER VERMERK INTEROFFICE MEMO NOTE DE LIAISON	Nummer der Anmeldung Application number Numéro de la Demande
EPO	PRINCIPAL DIRECTORATE FOR SEARCHING		EP 96 0134 97
OEB	DIRECTION PRINCIPALE RECHERCHE		Prüfer - Examiner - Examinateur J.F. MOYLE

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Lithium ion battery charge and discharge protection. Voltage boosted at low temperatures

**** C I T A T I O N C O M M E N T S : ****

GB-A-2282924 (4)
Charge and discharge protection of lithium ion cells (from same applicant).

US-A-5109151 (4)
Boosting voltage at low temp. for lead acid battery.

US-A-4687956 (4)
Low temp. battery volt booster.

JP-A-54085767 (2)
Battery voltage boosting circuit.